

96-205767/21 A97 E24 G02 (A14)

MITK 93.09.10  
\*JP 08073792-A

A(12-W7D) E(22-C, 22-C3, 23-B, 25-E) G(2-A4A, 2-  
A4B)

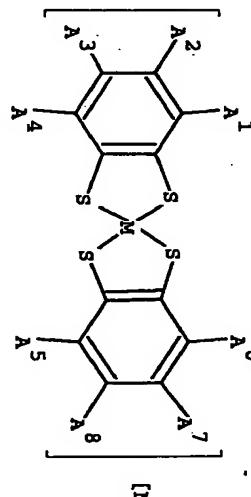
mitsui toatsu chem inc  
94.07.05 94JP-153777(+93JP-226000) (96.03.19) C09D 11/00, 11/02,  
11/10

Ink compsn. used for printing near IR light inspection - including  
phthalocyanine cpd., naphthalocyanine cpd., aminium salt and  
anthraquinone cpd.

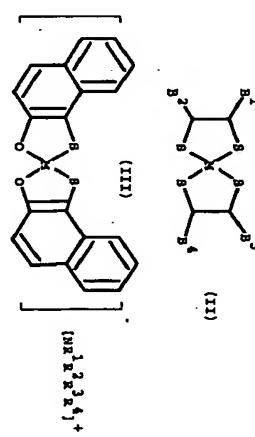
C96-065555

Addnl. Data: 94.09.01 94JP-208605, 93.12.10 93JP-310767

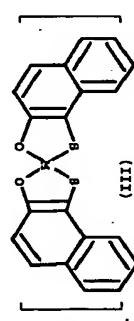
The ink comprises at least one of a near infrared ray absorber of metal  
complex of formula (I), (II) and (III), a phthalocyanine cpd. of  
formula (IV), a naphthalocyanine cpd. of formula (V), aminium salt of  
formula (VI) and anthraquinone cpd. of formula (VII), at least one of  
an acrylic resin (excepting for phthalocyanine cpd.), hydrocarbon  
resin, a copolymer of acrylic cpd. and hydrocarbon as a binder resin;



[NR<sup>1</sup>R<sup>2</sup>R<sup>3</sup>R<sup>4</sup>]<sup>+</sup>



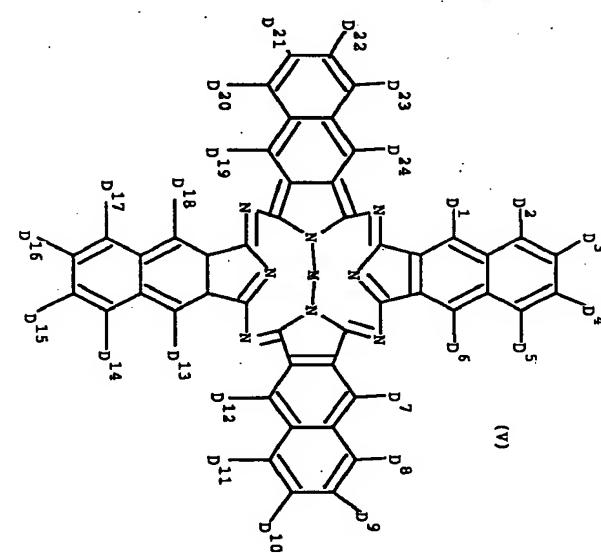
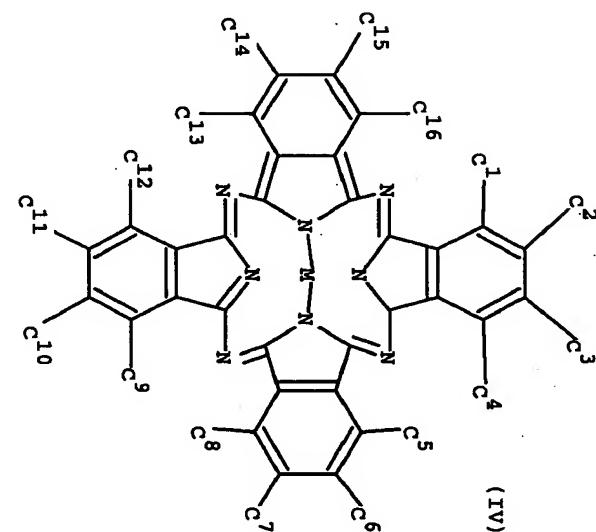
(II)



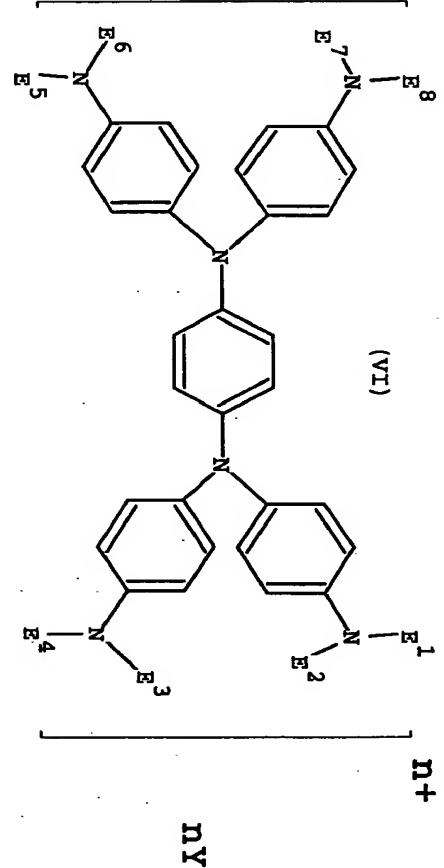
(III)

[NR<sup>1</sup>R<sup>2</sup>R<sup>3</sup>R<sup>4</sup>]<sup>+</sup>

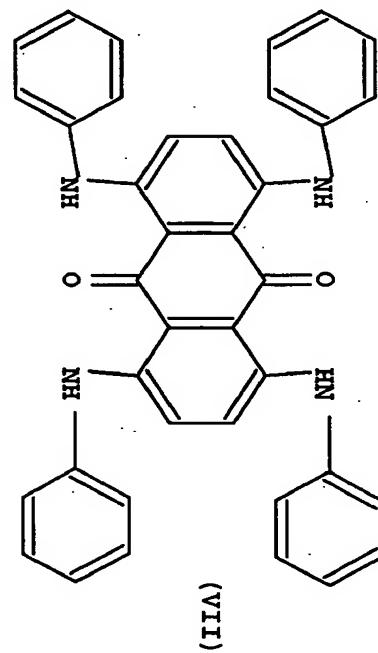
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$A^1-A^8 = H, \text{halogen}, \text{NO}_3, \text{CN}, \text{SCN}, \text{NCO}, \text{acyl}, \text{carbamoyl},$   
 $\text{alkylamino carbonyl}, \text{alkoxycarbonyl}, \text{aryloxycarbonyl}, \text{alkyl, aryl,}$   
 $\text{aryloxy, alkylthio, arylthio, alkylamino, arylamino,}$   
 $B^1-B^4 = H, \text{CN, acyl, carbamoyl, alkylamino carbonyl,}$   
 $\text{alkoxycarbonyl, aryloxycarbonyl, alkyl, aryl;}$   
 $R^1-R^4 = \text{alkyl, aryl, M = divalent metal, tri, tetravalent substituted}$   
 $\text{metal, oxy metal;}$   
 $C^1-C^{16}, D^1-D^{24} = H, \text{halogen, alkyl, alkoxy, aryl, aryloxy, alkylthio,}$



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arylthio, alkylamino, arylamide, amide;  
E<sup>1</sup>-E<sup>8</sup> = H, alkyl;  
Y = halogen, SbF<sub>6</sub>, ClO<sub>4</sub>, BF<sub>4</sub>, NO<sub>3</sub>;  
n = 1,2.

The above hydrocarbon portion may be substituted.

USE

The ink is used for printing a near infrared ray inspection material including banking material, pass, tickets, prepayed card, an identity card etc.

ADVANTAGE

The ink has a high light stability, and the printed matter by the ink shows high contrast by the difference of reflection in near infrared ray region between the printed portion and not printed portion.

PREFERRED COMPOSITION

The ink comprises UV absorber, a singlet oxygen quencher, a radical trapping agent or a solvent.  
(CM)  
(16pp011DwgNo.0/0)